

Final

WHAT IS CLAIMED IS:

1. An automated callback system, comprising:
 - at least a first instruction configured to detect that a called party is accessing the Internet via a computer terminal using a first line;
 - at least a second instruction configured to determine when the first line is busy, wherein the first line is busy because the computer terminal is using the first line;
 - at least a third instruction configured to detect when the caller is using a wireless telephone to call the first line;
 - at least a fourth instruction configured to determine when the first line is idle based at least in part on determining that the computer terminal has ceased accessing the Internet; and
 - at least a fifth instruction configured transmit a short message service (SMS) callback notification via email to the wireless telephone at least partly in response to the at least fourth instruction determining that the first line is idle, the callback notification including the called party's phone number.
2. The system as defined in Claim 1, further comprising a sixth instruction configured to transmit a message to the computer terminal, the message including a phone number associated with the wireless phone.
3. The system as defined in Claim 1, further comprising a sixth instruction configured to transmit a voice message from the caller over the Internet using Voice Over Internet Protocol to the computer terminal.
4. The system as defined in Claim 1, further comprising a sixth instruction configured to determine if the SMS message transmission failed.
5. The system as defined in Claim 4, further comprising:
 - a seventh instruction configured to determine if the SMS message transmission failed because the email address is unknown; and
 - an eight instruction configured to store an indication that no further messages are to be sent to the unknown email address.

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6. The system as defined in Claim 4, further comprising a seventh instruction configured to determine if the SMS message transmission failed because a mailbox associated with the wireless telephone is full and to store an indication that the SMS message transmission failed as a result of a transient condition.

7. The system as defined in Claim 1, further comprising a sixth instruction configured to determine a phone number for the wireless telephone.

8. The system as defined in Claim 1, further comprising a sixth instruction configured to determine an email address associated with the wireless telephone.

9. The system as defined in Claim 1, further comprising a sixth instruction configured to record a message from the caller.

10. The system as defined in Claim 1, further comprising a sixth instruction configured to transmit a second notification to the wireless telephone before transmitting the first notification, the second notification asking the caller if the caller wants to receive the first notification.

11. A method of processing a telecommunications call, the method comprising:
detecting a presence of a first subscriber communicating on a computer network via a first computer terminal, wherein the first computer terminal communicates over the computer network using a first telecommunications line associated with a first telephone number;

receiving a first call from a first caller calling via a wireless station, wherein the first call was initially directed to the first telecommunications line and then forwarded to a second telecommunications line because the first telecommunications line is busy, wherein the first telecommunications line is busy because the first computer terminal is using the first telecommunications line;

receiving signaling information associated with the first call, the signaling information including at least a second telephone number, the second telephone number associated with the wireless station;

determining when the first subscriber has ceased communicating on the computer network using the first computer terminal; and

transmitting to the wireless station a message at least partly in response to determining that the first subscriber has ceased communicating on the computer network, the message including an instruction related to calling back the first telephone number.

12.. The method as defined in Claim 11, wherein the act of determining that the first subscriber has ceased communicating on the computer network includes receiving a log-off message from the first computer terminal.

13. The method as defined in Claim 11, wherein the message is transmitted using a short message service.

14. The method as defined in Claim 11, further comprising notifying the first caller that the message will be transmitted to the first caller when the first telecommunications line is free.

15. The method as defined in Claim 11, wherein the instruction instructs the first caller to activate at least one of a "talk" key and a "send" key.

16. The method as defined in Claim 11, further comprising:

receiving a second call from a second caller, wherein the second call was initially directed to the first telecommunications line and then forwarded to the second telecommunications line;

transmitting a message to the computer terminal providing information on both the first call and the second call; and

receiving a selection from the subscriber indicating that the message should be transmitted only to one of the first caller and the second caller.

17. The method as defined in Claim 11, further comprising transmitting a notification to the first computer terminal, wherein the notification indicates that the first caller has attempted to call the first subscriber.

18. The method as defined in Claim 11, further comprising recording a voice message from the first caller and transmitting the voice message over the Internet to the first computer terminal before the first subscriber has ceased communicating on the computer network using the first computer terminal.

19. The method as defined in Claim 11, further comprising:

based at least in part on the wireless station's phone number and a Local Exchange Routing Guide, determining an identity of a carrier associated with the wireless station; and

generating an email address associated with the wireless station based at least in part on the identity of the carrier and on the wireless station's phone number, wherein the message is transmitted to the email address.

20. The method as defined in Claim 11, further comprising determining an email address associated with the wireless station from the wireless station's phone number using the ENUM protocol.

21. The method as defined in Claim 11, further comprising determining that the wireless station is a wireless station based on the second telephone number and a Local Exchange Routing Guide.

22. A method of processing a telecommunications call, the method comprising:

- detecting a presence of a first subscriber accessing a computer network via a first computer terminal connected to a first telephone line;
- receiving from a calling telephone station a forwarded call intended by a caller for the first telephone line;
- receiving signaling information associated with the forwarded call, the signaling information including at least a telephone number associated with the calling telephone station;
- providing an indication to the calling telephone station that the first telephone line is busy;
- determining when the first subscriber is no longer accessing the computer network via the first computer terminal; and
- at least partly in response to determining that the first subscriber is no longer accessing the computer network via the first computer terminal, transmitting a first notification to the first caller, the first notification including callback information.

23. The method as defined in Claim 22, wherein the callback information includes the telephone number.

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24. The method as defined in Claim 22, wherein the callback information includes the subscriber's name.
25. The method as defined in Claim 22, further comprising enabling first subscriber to call back the calling telephone station using the callback information.
26. The method as defined in Claim 22, wherein the act of detecting the presence of the first subscriber includes receiving periodic communications from a client application executing on the first computer terminal.
27. The method as defined in Claim 22, wherein the first notification is emailed to an email address generated at least in part on the telephone number.
28. The method as defined in Claim 22, wherein the first notification is transmitted using a short message service protocol.
29. The method as defined in Claim 22, wherein the first notification is transmitted using a Wireless Application Protocol (WAP).
30. The method as defined in Claim 22, wherein the calling telephone station is a cellular telephone.
31. The method as defined in Claim 22, further comprising causing the first notification to be transmitted to a short message service center which routes the first notification to mobile switching center based at least in part on information from a home location register.
32. The method as defined in Claim 22, further comprising:
 - causing the first notification to be transmitted to a short message service center which routes the first notification to mobile switching center;
 - causing the first notification to be transmitted from the mobile switching center to a base station system; and
 - causing the first notification to be transmitted from the base station system to the second telephone terminal.
33. A method of call processing, comprising:
 - detecting that a first user is accessing a computer network using a first line;
 - detecting that a second user is calling the first user when the first user's line is busy and the first user is accessing the computer network;

T U P L E C O M P A N Y

determining that the second user is calling using a wireless station;
detecting that the first user has ceased accessing the computer network; and
at least partially in response to detecting that the first user has ceased
accessing the computer network, enabling the second user to call the first line via the
wireless station using a single key entry.

34. The call processing method as defined in Claim 33, further comprising
transmitting a message to the wireless station asking the second user if a
callback procedure is to be performed; and
receiving a response from the second user instructing that the callback
procedure is to be performed.

35. The call processing method as defined in Claim 33, further comprising
communicating with a client application executing on a computer used by the first user to
access the computer network, wherein the act of detecting that the user has ceased accessing
the computer network includes determining that the client application has transmitted a log-
off communication.

36. The call processing method as defined in Claim 33, wherein the act of
detecting when the second user is calling the first user when the first user's line is busy
includes detecting that the second user's call to the first user is forwarded to another phone
number.

37. The call processing method as defined in Claim 33, further comprising:
receiving a phone number associated with the wireless station;
determining an identity of a carrier associated with the wireless station; and
determining an email address associated with the wireless station based at
least on the phone number associated with the wireless station and the carrier identity.

38. The call processing method as defined in Claim 33, wherein the act of
enabling the second user to call the first line further comprises transmitting an email message
to an email address associated with the wireless station, wherein the email message includes
a phone number associated with the wireless station.

39. The call processing method as defined in Claim 33, wherein the act of enabling the second user to call the first line further comprises transmitting a message to the wireless calling station, wherein the message is displayed using a browser.

40. A call processing system, comprising:

a first instruction configured to detect when a first user is accessing a computer network using a first line;

a second instruction configured to detect when a second user is calling the first user when the first line is busy;

a third instruction configured to determine that the second user is calling using a wireless station;

a fourth instruction configured to detect that the first user has ceased accessing the computer network; and

a fifth instruction configured to transmit callback information to the wireless station at least partially in response to the fourth instruction detecting that the first user has ceased accessing the computer network.

41. The call processing system as defined in Claim 40, further comprising a call manager server system configured to execute the first, second, third, fourth, and fifth instruction.

42. The call processing system as defined in Claim 41, further comprising a client application configured to be executed on a computer system connected to the first line and to transmit presence information to the call manager server system.

43. The call processing system as defined in Claim 40, wherein the fifth instruction is further configured to include in the callback information a phone number associated with the first line.

44. The call processing system as defined in Claim 40, further comprising a sixth instruction configured to transmit a notification via an instant messaging service to the first user, the notification including information related to the second user's call.

45. The call processing system as defined in Claim 40, further comprising a sixth instruction configured to inhibit the transmission of the callback information to the wireless station at least partly in response to an instruction from the first user.

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46. A method of providing line status information, comprising:

receiving over a network presence information from a client application executing on a computer system accessing a first telephone line;

receiving on a second telephone line a call intended by a caller to be connected to the first telephone line, wherein the call was forwarded to the second telephone line at least in part due to the computer system accessing the first telephone line;

determining that computer system has ceased accessing the first telephone line; and

transmitting a text notification to the caller at least partly in response to determining that computer system has ceased accessing the first telephone line.

47. The method as defined in Claim 46, further comprising initiating a bridged call between the caller and the first telephone line.

48. The method as defined in Claim 46, further comprising determining that the text notification was not received by the caller.

49. The method as defined in Claim 46 further comprising transmitting a text notification failure message to the first telephone line at least partly in response to determining that the text notification was not received by the caller.

50. The method as defined in Claim 46, further comprising:

recording a voice message from the caller; and

transmitting the recorded voice message and a text message related to the caller's call to the computer system.

51. The method as defined in Claim 46, wherein the text notification is transmitted to the caller using a short message service (SMS).

52. The method as defined in Claim 46, wherein the text notification is transmitted to a wireline telephone associated with the caller.

53. The method as defined in Claim 46, wherein the text notification is transmitted to the caller using Wireless Application Protocol (WAP).

54. The method as defined in Claim 46, further comprising providing a voice prompt to the caller, the voice prompt instructing the caller to take a first action in order to have the text notification transmitted to the caller.

55. A method of providing line status information, comprising:

receiving over a network presence information from a client application executing on a computer system accessing a first telephone line;

receiving on a second telephone line a call intended by a caller to be connected to the first telephone line, wherein the call was forwarded to the second telephone line at least in part due to the computer system accessing the first telephone line;

determining that computer system has ceased accessing the first telephone line; and

bridging a call between the first telephone line and the caller at least partly in response to determining that computer system has ceased accessing the first telephone line.

56. A calling system, comprising:

a call manager system configured to receive presence information from a client application executing on a computer system accessing a first telephone line, and configured to receive a forwarded call intended by a caller to be connected to the first telephone line, wherein the call manager is further configured to determine that the computer system has ceased accessing the first telephone line and to transmit a notification to the caller at least partly in response to determining that computer system has ceased accessing the first telephone line; and

the client application, wherein the client application is configured to provide the presence information to the call manager system.

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